

HUNTON &
WILLIAMS

C.F.T.C.
OFFICE OF THE SECRETARIAT
2009 NOV 5 AM 10 07

HUNTON & WILLIAMS LLP
1900 K STREET, N.W.
WASHINGTON, D.C. 20006-1109

TEL 202 • 955 • 1500
FAX 202 • 778 • 2201

Received CFTC
Records Section
11/5/09

MARK W. MENEZES
DAVID T. MCINDOE
R. MICHAEL SWEENEY, JR.
EMAIL: mmenezes@hunton.com
dmcindoe@hunton.com
rsweeney@hunton.com

FILE NO: 76142.2

November 4, 2009

David A. Stawick, Secretary
Commodity Futures Trading Commission
Three Lafayette Center
1155 21st Street, NW
Washington, DC 20581

VIA ELECTRONIC MAIL

COMMENT

Re: *Significant Price Discovery Contract Proceeding, Phys, BS, LD1 (US/MM), AB-NIT Contract, et al., Comment File 09-029*

Dear Secretary Stawick:

On behalf of the Working Group of Commercial Energy Firms (the "Working Group"), Hunton & Williams LLP submits the following comments in response to the request for public comment set forth in the Notice of Intent ("NOI") issued by the Commodity Futures Trading Commission ("CFTC" or "Commission") and published in the *Federal Register* on October 20, 2009,¹ addressing whether the Phys, BS, LD1 (US/MM), AB-NIT Contract, et al., offered for trading on the Natural Gas Exchange, Inc. ("NGX") perform significant price discovery functions. Specifically, the Working Group respectfully submits comments that are limited to the following contracts identified in the NOI:

- Phys, BS, LD1 (US/MM), AB-NIT Contract ("Alberta Basis Contract");
- Phys, BS, LD1 (US/MM), Union-Dawn Contract ("Union-Dawn Basis Contract"); and
- Phys, ID, 7a (CA/GJ), AB-NIT Contract ("Alberta Index Contract").²

¹ Notice of Intent, Pursuant to the Authority in Section 2(h)(7) of the Commodity Exchange Act and Commission Rule 36.3(c)(3), to Undertake a Determination Whether the (1) Phys, BS, LD1 (US/MM), AB-NIT Contract, et al., Offered for Trading on the Natural Gas Exchange, Inc., Perform Significant Price Discovery Functions, 74 Fed. Reg. 53,724 (Oct. 20, 2009).

² The Alberta Basis Contract, Union-Dawn Basis Contract, and Alberta Index Contract are collectively referred to as the "NGX Contracts."

The Working Group is a diverse group of commercial firms in the domestic energy industry whose primary business activity is the physical delivery of one or more energy commodities to customers, including industrial, commercial and residential consumers. Members of the Working Group consist of energy producers, marketers and utilities. The Working Group considers and responds to requests for public comment regarding legislative and regulatory developments with respect to the trading of energy commodities, including derivatives and other contracts that reference energy commodities.

As discussed further in these comments, the Working Group does not believe that these NGX Contracts perform a significant price discovery function and therefore should not be designated as significant price discovery contracts ("SPDCs") at this time.

I. COMMISSION AUTHORITY AND DISCRETION TO DESIGNATE CONTRACTS AS SPDCS.

In 2000, Congress enacted the Commodity Futures Modernization Act ("CFMA"),³ which amended the Commodity Exchange Act ("CEA"), 7 U.S.C. §§ 1 *et seq.*, to create a tiered approach to the regulation of futures and derivatives markets to replace the CEA's then-existing "one size fits all" regulatory framework. As part of this tiered approach, the CFMA created exempt commercial markets ("ECMs"). ECMs are principal-to-principal electronic trading platforms designed to encourage electronic trading of derivatives by sophisticated market participants.⁴ ECMs were subject to limited Commission regulation and oversight under the CFMA amendments to the CEA.

In June 2008, Title XIII of the Food, Conservation and Energy Act of 2008⁵ was enacted and, in relevant part, amended the CEA to include new Section 2(h)(7). CEA Section 2(h)(7) expanded the Commission's limited authority over ECMs to identify and list contracts that serve a significant price discovery function.⁶ Specifically, this provision sets forth enumerated factors that the Commission must consider when determining whether a contract performs a significant price discovery function: (1) Price Linkage; (2) Arbitrage; (3) Material Price Reference; (4) Material Liquidity; and (5) Other Factors.

The purpose of new CEA Section 2(h)(7) is to make the regulation of certain contracts traded on ECMs similar to the Commission's regulation of those contracts traded on designated contract markets ("DCMs"). Accordingly, in situations where the Commission

³ Incorporated as Appendix E of the Consolidated Appropriations Act of 2001, Pub. L. No. 106-554, 114 Stat. 2763 (Dec. 21, 2000).

⁴ The NGX is an ECM.

⁵ Title XIII of the Food, Conservation and Energy Act of 2008, Pub. L. No. 110-246, 122 Stat. 1623 (June 18, 2008) (the "Reauthorization Act").

⁶ Section 13204(c) of the Reauthorization Act requires the Commission to identify contracts that it deems appropriate for designation as SPDCs within 180 days after issuing rules implementing new CEA Section 2(h)(7).

determines that ECM contracts serve a significant price discovery function similar to contracts traded on a DCM, those contracts are subject to comparable regulation.

On March 23, 2009, the Commission issued a final rule implementing the provisions of new CEA Section 2(h)(7) subjecting ECMs with SPDCs to self-regulatory and reporting requirements, as well as certain Commission oversight authorities with respect to those contracts.⁷ The SPDC Final Rule became effective on April 22, 2009. Among other things, the Commission adopted regulations establishing the procedures and the standards by which it will determine whether an ECM contract performs a significant price discovery function and provided guidance with respect to compliance with nine statutory core principles applicable to ECMs.⁸

The Commission has broad discretion when determining whether to designate a contract as an SPDC. Importantly, not all of the various statutory factors must be present to support a determination that a contract performs a significant price discovery function. In this regard, CEA Section 2(h)(7) neither prioritizes nor specifies the degree to which a contract must conform to the various factors.

II. PROPOSED DESIGNATION OF THE NGX CONTRACTS AS SPDCs.

The Working Group fully supports the Commission's efforts to exercise in a disciplined and deliberate manner its statutory obligations under the Reauthorization Act to designate contracts traded on ECMs that meet the statutory criteria set forth in CEA Section 2(h)(7) as SPDCs. However, it is not clear that these NGX Contracts satisfy the factors upon which the Commission proposes to base its respective determinations that these contracts perform significant price discovery functions. Accordingly, the Working Group respectfully submits that the Commission should refrain from designating the referenced NGX Contracts as SPDCs.⁹

The designation of the NGX Contracts as SPDCs will not further in a meaningful manner other policy concerns identified by the Commission to the extent that they relate to protecting (a) the NYMEX NG Contract and (b) the underlying physical markets at Henry Hub from excessive speculation or manipulation. The designation of the NGX Contracts as SPDCs and the required imposition of position limits on these contracts by NGX have the potential to harm liquidity, which, in turn, could result in industrial, commercial and residential consumers in the U.S. and Canada incurring higher energy prices.

⁷ See *Significant Price Discovery Contracts on Exempt Commercial Markets*, 74 Fed. Reg. 12,178 (Mar. 23, 2009) ("SPDC Final Rule"); 17 C.F.R. § 36.3 (2009).

⁸ *Id.* at § 36.3(c)(3).

⁹ Attached as Exhibit 1 is the NGX Price Index Methodology Guide (Oct. 16, 2009 Version) published by NGX (the "Methodology Guide"). The methodology for all of the NGX physical indices is set forth in detail in the Methodology Guide, starting at page 8.

Specifically, existing NYMEX-enforced accountability levels and position limits protect the NYMEX NG Contract and the underlying physical Henry Hub market from the effects of excessive speculation and manipulation.¹⁰ In addition, physical pricing at Henry Hub is also protected from excessive speculation in over-the-counter (“OTC”) derivatives markets through position limits enforced by ICE for the Henry Financial LD1 Fixed Price contract that was recently designated as an SPDC.¹¹

The Commission also has broad authority under CEA Section 9(a)(2) to protect against entities engaged in CFTC-jurisdictional activities from manipulating physical prices at Henry Hub.¹² With regard to physical prices at Henry Hub, this authority is complemented by the Federal Energy Regulatory Commission’s (“FERC”) jurisdiction under the Natural Gas Act (“NGA”), 15 U.S.C. § 717 *et seq.*, to regulate wholesale, physical natural gas markets and FERC’s authority to prohibit the manipulation of natural gas markets under NGA Section 4A, 15 U.S.C. § 717c-1.

Each NGX Contract is separately addressed below.

A. ALBERTA BASIS CONTRACT.

The Alberta Basis Contract is a monthly contract that calls for physical delivery of natural gas based on the final settlement price for NYMEX’s Henry Hub physically-delivered natural gas futures contract for the specified calendar month (“NYMEX NG Contract”), plus or minus the price differential (basis) between the Alberta delivery point (“Alberta System”) and the Henry Hub. There is no standard size for the Alberta Basis Contract, although a minimum volume of 100 mmBtu is required in increments of 100 units per day. The Alberta Basis Contract is listed for 60 consecutive calendar months. The NOI states that the Alberta Basis Contract appears to satisfy the Material Liquidity, Price Linkage, and Material Price Reference factors required for SPDC designation.¹³

¹⁰ See <<http://www.nymex.com/NG_spec.aspx>>. The NYMEX-enforced accountability levels and position limits for the NYMEX NG Contract are “12,000 net futures, but not to exceed 1,000 in the last three days of trading in the spot month.”

¹¹ See Order Finding that the ICE Henry Financial LD1 Fixed Price Contract Traded on the IntercontinentalExchange, Inc., Performs a Significant Price Discovery Function, Final Order, 74 Fed. Reg. 37,988 (July 30, 2009).

¹² 7 U.S.C. § 9(a)(2).

¹³ NOI at p. 53,726.

1. MATERIAL PRICE REFERENCE.

The NOI states that the Alberta Basis Contract may perform a significant price discovery function as it appears to satisfy the Material Price Reference factor. CEA Section 2(h)(7)(B)(iii) requires the Commission to consider “the extent to which, on a frequent and recurring basis, bids, offers, or transactions in a commodity are directly based on, or are determined by referencing, the prices generated” by the ECM.¹⁴ Guidance set forth in Appendix A to Section 36 of the Commission’s regulations states that the Commission will rely on one of two sources of evidence, direct or indirect, that the contract is a Material Price Reference.¹⁵ A direct reference would be whether the cash market quotes the ECM contract.¹⁶ An indirect reference would be whether an industry publication quotes the ECM contract’s price.¹⁷ The Alberta Basis Contract does not meet either of these standards.

a. Direct Reference.

There are no other related contracts traded in any market that settle to, or reference, the Alberta Basis Contract. The Material Price Reference for the Alberta Basis Contract itself is derived from the settlement price for the NYMEX NG Contract and the price differential between the Alberta System and the Henry Hub. Neither price reference is based on the Alberta Basis Contract. Although the Alberta Basis Contract is influenced by these direct references, the Alberta Basis Contract itself neither influences the settlement of the NYMEX NG Contract nor does it influence the price differential between Henry Hub and the Alberta System.

b. Indirect Reference.

As to the indirect reference regarding whether an industry publication quotes the ECM contract’s price, the only publication to which the CFTC refers is the “OTC Gas End of Day,” which is published by the IntercontinentalExchange, Inc. (“ICE”), an ECM, on behalf of NGX and its participants. As noted in the NOI, NGX has entered into an alliance with ICE pursuant to which ICE (a) is the exclusive trading platform for virtually all natural gas and electricity products traded in the NGX markets, including the Alberta Basis Contract, and (b) provides clearing and settlement services for physical OTC natural gas contracts on select U.S. trading hubs, including Henry Hub.

The Working Group does not believe the fact that ICE publishes the settlement prices of NGX physical transactions constitutes sufficient evidence of a Material Price Reference

¹⁴ 7 U.S.C. § 2(h)(7)(B)(iii).

¹⁵ 17 C.F.R. Part 36, Appendix A (2009) (Guidance on Significant Price Discovery Contracts).

¹⁶ *Id.*

¹⁷ *Id.*

necessary to satisfy the requirements of CEA Section 2(h)(7)(B)(iii). No data is sold between NGX and ICE and NGX does not publish any trade data on its own website. Given this unique arrangement, it is only logical that ICE publishes transaction data regarding the NGX physical deals in its "OTC Gas End of Day" publication. There is no evidence whatsoever that a contract in any market is tied directly or indirectly to the settlement price of the Alberta Basis Contract.

2. PRICE LINKAGE.

To establish Price Linkage, an agreement, contract or transaction must use or otherwise rely on a settlement price or other major price parameter of a contract(s) listed for trading on a DCM or an SPDC on an ECM.¹⁸ As noted in the NOI, the Alberta Basis Contract is technically linked to the NYMEX NG Contract. Notwithstanding this partial linkage, the Alberta Basis Contract does not appear to perform a significant price discovery function.

Guidance set forth in Appendix A of Part 36 of the Commission's regulations is instructive in this regard as it states, in relevant part, that:

A price-linked contract is a contract that relies on a contract traded on another trading facility to settle, value or otherwise offset the price linked contract. The link may involve one-to-one linkage, in that the value of the linked contract is based on a single contract's price, or it may involve multiple contracts.

For a linked contract, the mere fact that a contract is linked to another contract will not be sufficient to support a determination that a contract performs a significant price discovery function. To assess whether such a determination is warranted, the Commission will examine the relationship between transaction prices of the linked contract and prices of the referenced contract. The Commission believes where material liquidity exists, prices for the linked contract would be observed to be substantially the same as or move substantially in conjunction with prices of the referenced contract(s).¹⁹

¹⁸ 17 C.F.R. § 36, Appendix A(B).

¹⁹ 17 C.F.R. § 36, Appendix A(B)(2) (emphasis added).

Publicly-available, empirical data shows that the Alberta Basis Contract (a) is not substantially the same as the NYMEX NG Contract nor (b) does it move substantially in conjunction with NYMEX NG Contract.

A head-to-head comparison of the Alberta Basis Contract with the NYMEX NG Contract settlement prices published during the 75-day period beginning July 21, 2009 through November 2, 2009, clearly establishes that these contracts are not “substantially the same.” For example, the price for the December NYMEX NG Contract during this period is approximately \$5.30/mmbtu. In contrast, the basis price of the Alberta Basis Contract is approximately \$0.40/mmbtu below the December NYMEX NG Contract price. Price data published during this period also provides evidence that the Alberta Basis Contract does not “move substantially in conjunction with” the December NYMEX NG Contract. Specifically, the correlation of the daily changes between the December NYMEX NG Contract and the Alberta Basis Contract is negative 35 percent for this period.

3. MATERIAL LIQUIDITY.

To meet the Material Liquidity test, CEA Section 2(h)(7)(B)(iv) requires that the contract traded on the ECM must trade with sufficient volume “to have a material effect on other agreements, contracts, or transactions listed for trading . . . on a designated contract market” or ECM.²⁰ The Commission also states “[l]iquidity is a broad concept that captures the ability to transact immediately with little or no price concession.”²¹ The Alberta Basis Contract lacks both (a) a material effect on other contracts and (b) sufficient liquidity to perform a significant price discovery function.

a. No Material Effect on Other Contracts Listed for Trading.

As noted above, there is no evidence of other related contracts traded in any market that settle to, or reference, the Alberta Basis Contract. The NGX trading platform is unique as it offers both basis contracts, *i.e.*, the Alberta Basis Contract, and outright contracts. Because the pricing components of the basis and outright physical contracts traded on the NGX platform are interrelated, they help to create a market equilibrium within the Canadian system. Consequently, given this equilibrium, although the Alberta Basis Contract is influenced by the price differential of physical gas between the Alberta System and Henry Hub and the settlement of the NYMEX NG Contract, it has no functional effect on the

²⁰ 7 U.S.C. § 2(h)(7)(B)(iv).

²¹ 17 C.F.R. Part 36, Appendix A (2009).

NYMEX NG Contract itself, nor does it have any effect on actual physical prices at Henry Hub.²²

b. Liquidity in the Alberta Basis Contract Is Insufficient for Designation as an SPDC.

Guidance set forth in Appendix A to Section 36 of the Commission's regulations states, in relevant part, that "in markets where material liquidity exists, a more or less continuous stream of prices can be observed and the prices should be similar," for example, to "a market where trades occur multiple times per minute." The quoted language indicates two factors that can show liquidity: (a) a narrow bid/ask spread, and (b) a trade frequency of multiple trades per minute.²³ The NOI does not address either of these factors. Rather, it states that the Alberta Basis Contract was transacted on an average daily basis of 23.2 times. Based on the average daily trade data set forth in the NOI, the trade frequency of the Alberta Basis Contract in terms of multiple trades per minute is very low.²⁴ Because neither factor is presented by the Alberta Basis Contract, trading in this contract fails to meet this standard.

B. UNION-DAWN BASIS CONTRACT.

The Union-Dawn Basis Contract is a monthly contract that calls for physical delivery of natural gas based on the final settlement price for NYMEX's Henry Hub physically-delivered natural gas futures contract for the specified calendar month ("NYMEX NG Contract"), plus or minus the price differential (basis) between the Dawn delivery point ("Dawn Hub") and the Henry Hub. There is no standard size for the Union-Dawn Basis Contract, although a minimum volume of 100 mmBtu is required in increments of 100 units per day. The Union-Dawn Basis Contract is listed for 60 consecutive calendar months.

²² As discussed above, the Commission possesses broad existing statutory and regulatory authority to protect against excessive speculation and manipulation involving the NYMEX NG Contract which, in turn, could result in the manipulation of physical prices at Henry Hub. Additionally, it possesses broad anti-manipulation authority to address jurisdictional activity that could result in the manipulation of physical pricing at Henry Hub. This authority complements FERC's jurisdiction under the NGA over wholesale, physical gas markets and FERC's broad anti-manipulation authority under NGA Section 4A.

²³ Because the NOI does not expressly address how the Alberta Basis Contract satisfies the guidance in Appendix A of the Commission's regulation for Material Liquidity (*i.e.*, narrow bid/ask spread and trade frequency of multiple trades per minute), the Working Group respectfully requests that the Commission expressly identify the criteria supporting its view that the Alberta Basis Contract appears to meet the Material Liquidity factor.

²⁴ The transaction volume associated with the Alberta Basis Contract is de minimis compared to the transaction volumes of the NYMEX NG Contract or the Henry Financial LD1 Fixed Price contract traded on ICE which was recently designated as an SPDC. The NOI states that the Alberta Basis Contract has a daily trading volume of approximately 6,000,000 mmBtu. Although this figure initially sounds significant, when quantified in the same terms as the NYMEX NG Contract (*i.e.*, 10,000 mmBtu/contract), the daily trading volume for the Alberta Basis Contract is only 600 contracts. Accordingly, the Alberta Basis Contract has a trading volume that, by comparison, is less than 1 percent of trading volume of the NYMEX NG Contract or the Henry Financial LD1 Fixed Price contract traded on ICE.

The NOI states that the Union-Dawn Basis Contract appears to satisfy the Material Liquidity, Price Linkage, and Material Price Reference factors required for SPDC designation.²⁵ Because it is not clear that the Union-Dawn Basis Contract satisfies these factors, the Working Group respectfully submits that the Commission should refrain from designating the Union-Dawn Basis Contract as an SPDC.

1. MATERIAL PRICE REFERENCE.

The NOI states that the Union-Dawn Basis Contract may perform a significant price discovery function as it appears to satisfy the Material Price Reference factor. The Union-Dawn Basis Contract does not meet either the direct or indirect standards.

a. Direct Reference.

The Material Price Reference for the Union-Dawn Basis Contract itself is derived from the settlement price for the NYMEX NG Contract and the price differential for physical gas between the Dawn Hub and Henry Hub. Neither the NYMEX NG Contract nor the price differential between Dawn Hub and Henry Hub are based on the Union-Dawn Basis Contract. Although the Union-Dawn Basis Contract is influenced by these direct references, the Union-Dawn Basis Contract itself neither influences the settlement of the NYMEX NG Contract nor does it influence physical pricing at Henry Hub.

b. Indirect Reference.

As to the indirect reference regarding whether an industry publication quotes the ECM contract's price, the only publications to which the CFTC refers is the "OTC Gas End of Day," which is published by ICE. As noted Section II.A.1.b, above, the alliance between ICE and NGX in effect makes ICE an extension of NGX and vice versa. Given this unique arrangement, it is only logical that ICE publishes transaction data regarding the NGX physical deals in its "OTC Gas End of Day" publication. The Working Group does not believe the fact that ICE publishes the settlement prices of NGX physical transactions in "OTC Gas End of Day" constitutes sufficient evidence of a Material Price Reference necessary to satisfy the requirements of CEA Section 2(h)(7)(B)(iii). Moreover, there is no evidence whatsoever that a contract in any market is tied directly or indirectly to the settlement price of the Union-Dawn Basis Contract.

2. PRICE LINKAGE.

The Union-Dawn Basis Contract is technically linked to the NYMEX NG Contract. Notwithstanding this partial linkage, the Union-Dawn Basis Contract does not appear to

²⁵ NOI at p. 53,726.

perform a significant price discovery function. Publicly-available, empirical data shows that the Union-Dawn Basis Contract (a) is not substantially the same as the NYMEX NG Contract nor (b) does it move substantially in conjunction with NYMEX NG Contract.

A head-to-head comparison of the Union-Dawn Basis Contract with the December NYMEX NG Contract settlement prices published during the 75-day period beginning July 21, 2009 through November 2, 2009, clearly establishes that these contracts are not “substantially the same.” As noted in Section II.A.2, above, the December NYMEX NG Contract price is approximately \$5.30/mmbtu. The basis price of the Union-Dawn Basis Contract is approximately \$0.33/mmbtu below the December NYMEX NG Contract. Price data published during this 75-day period also provides evidence that the Union-Dawn Basis Contract does not “move substantially in conjunction with” the December NYMEX NG Contract. Specifically, the correlation of the daily changes between the December NYMEX NG Contract and the Union-Dawn Basis Contract is negative 22 percent for this period.

3. MATERIAL LIQUIDITY.

As explained above, in order to meet the Material Liquidity test, a contract must have (a) a material effect on other contracts and (b) sufficient liquidity to perform a significant price discovery function. The Union Dawn Basis Contract lacks both (a) a material effect on other contracts and (b) sufficient liquidity to perform a significant price discovery function.

a. No Material Effect on Other Contracts Listed for Trading.

As noted above, there is no evidence of other related contracts traded in any market that settle to, or reference, the Union-Dawn Basis Contract. The NGX trading platform is unique as it offers both basis contracts, *i.e.*, the Union-Dawn Basis Contract, and outright contracts. Because the pricing components of the basis and outright physical contracts traded on the NGX platform are interrelated, they help to create a market equilibrium within Canadian system. Consequently, although the Union-Dawn Basis Contract is influenced by the price differential of physical gas between the Dawn Hub and Henry Hub and the settlement of the NYMEX NG Contract, it has no functional effect on the NYMEX NG Contract itself, nor does it have any effect on actual physical prices at Henry Hub.²⁶

b. Liquidity in the Union-Dawn Basis Contract Is Insufficient for Designation as an SPDC.

As discussed in Section II.A.3.b, above, the CFTC has identified two factors that can show liquidity: (a) a narrow bid/ask spread, and (b) a trade frequency of multiple trades per

²⁶

See note 21, *supra*.

minute.²⁷ The NOI does not address either of these factors. Rather, it states that the Union-Dawn Basis Contract was transacted on an average daily basis of 8.3 times. Based on the average daily trade data set forth in the NOI, the trade frequency of the Union-Dawn Basis Contract in terms of multiple trades per minute is extremely low.²⁸ Because neither factor is presented by the Union-Dawn Basis Contract, trading in this contract fails to meet this standard.

C. ALBERTA INDEX CONTRACT.

The Working Group also submits that the Alberta Index Contract also lacks sufficient liquidity to perform a significant price discovery function. The NOI does not address either of the CFTC-identified liquidity factors: (a) the narrow bid/ask spread, or (b) the trade frequency of multiple trades per minute. Rather, the NOI states that the Alberta Index Contract was transacted on an average daily basis of 10.9 times. Based on the average daily trade data set forth in the NOI, the trade frequency of the Alberta Index Contract in terms of multiple trades per minute is extremely low.²⁹ As a result, the Alberta Index Contract is unable to provide a significant price discovery function to the U.S. natural gas market.

²⁷ Because the NOI does not expressly address how the Union-Dawn Basis Contract satisfies the guidance in Appendix A of the Commission's regulation for Material Liquidity (*i.e.*, narrow bid/ask spread and trade frequency of multiple trades per minute), the Working Group respectfully submits that the Commission expressly identify the criteria supporting its view that the Union-Dawn Basis Contract appears to meet the Material Liquidity factor.

²⁸ The NOI states that the Union-Dawn Basis Contract has a daily trading volume of approximately 1,332,400 mmBtu. When quantified in the same terms as the NYMEX NG Contract (*i.e.*, 10,000 mmBtu/contract), the average daily trading volume for the Union-Dawn Basis Contract is approximately 132 contracts per day. By comparison, this trading daily volume of the Union-Dawn Basis Contract is less than 1 percent of trading volume of the NYMEX NG Contract or ICE's Henry Financial LD1 Fixed Price contract.

²⁹ Similar to the Albert Basis Contract and the Union-Dawn Basis Contract, the transaction volume associated with the Alberta Index Contract is de minimis compared to the transaction volumes of the NYMEX NG Contract or the Henry Financial LD1 Fixed Price contract traded on ICE. The NOI states that the Alberta Index Contract has a daily trading volume of approximately 2,438,627 mmBtu. When quantified in the same terms as the NYMEX NG Contract (*i.e.*, 10,000 mmBtu/contract), the average daily volume for the Alberta Index Contract is approximately 244 contracts per day, which is less than 1 percent of trading volume of the NYMEX NG Contract or ICE's Henry Financial LD1 Fixed Price contract.

David A. Stawick, Secretary
Commodity Futures Trading Commission
November 4, 2009
Page 12

III. CONCLUSION.

The Working Group appreciates this opportunity to comment, and requests that the Commission consider these comments as it develops a final rule in this proceeding. Given the limited time provided for public comment, the Working Group expressly reserves the right to supplement these comments as deemed necessary and appropriate.

Respectfully Submitted,

/s/ Mark W. Menezes

Mark W. Menezes

David T. McIndoe

R. Michael Sweeney, Jr.

*Counsel for the
Working Group of Commercial Energy Firms*

Exhibit 1
NGX Price Index Methodology Guide (Oct. 16, 2009 Version)



NGX Price Index Methodology Guide
Oct 16, 2009 Version

Natural Gas Exchange Inc.

NGX PRICE INDEX METHODOLOGY GUIDE

Table of Contents

1	Introduction	1
2	Contracting Party's Agreement.....	1
3	Intellectual Property Rights.....	1
4	Price Index Generation	2
	4.1 Index Period.....	2
	4.2 Source Data	3
	4.3 Volume Weighted Average.....	3
	4.4 Exclusion of Bilateral Transactions in Natural Gas Indices	4
	4.5 Inclusion of Bilateral Transaction in Crude Oil Indices.....	4
	4.6 Evaluation and Potential Exclusion of Irregular Market Data.....	4
5	Changes to NGX Price Index Methodology Guide.....	4
6	Publication.....	4
	6.1 Reporting and Analytics.....	4
7	Price Indices and the CPA.....	5
	7.1 Exclusion of Trades In Error.....	5
	7.2 Price Transparency.....	5
	7.3 Linked Deals, Time Trades, and Multiple Month Terms	5
	7.4 NGX Trading System Availability.....	5
	7.5 Real-Time Price Indices.....	6
	7.6 Not Fair Market Value	6
	7.7 Trading Irregularities	6
	7.8 Limitation of Liability.....	6
	APPENDIX A: PRICE INDEX METHODOLOGY	8
1	NGX AB-NIT Same Day Indices.....	8
	1.1 Index Diversity	9
	1.2 Weekend#	9
	1.3 Month ending on a weekend or Statutory and Other Holidays	9
	1.4 Methodologies.....	9
2	NGX AB-NIT Month Ahead Indices	11
	2.1 Index Data Source	11
	2.2 Methodologies.....	11
	2.3 Statutory and Other Holidays	12
3	NGX Daily Spot Gas Price Indices	12
	3.1 Index Data Source	12
	3.2 Index Diversity	13
	3.3 WKD.....	14
	3.4 Methodologies.....	14
	3.5 Statutory and Other Holidays	14
4	NGX AB-NIT Same Day and NGX AB-NIT Yesterday Indices	14
	4.1 Index Diversity	15
	4.2 Proxy	15
	4.3 Methodologies.....	15
	4.4 Statutory and Other Holidays	16
5	NGX Crude Oil Indices	16
	5.1 Index Data Source	16
	5.2 Statutory and Other Holidays	17

5.3	Example	17
6	NGX Alberta Electricity RRO Indices	17
6.1	Combined Index Generation.....	18
6.2	Qualifying Spreads.....	18
6.3	Qualifying Trades.....	19
6.4	Calculating the Daily Post Price Using Spreads:	19
6.5	Calculating the Daily Traded Price Using Trades:	21
6.6	Calculating the Daily Combined Index Price Using Spreads and Trades:	21
6.7	Example of Calculating a Daily Combined Index Price:.....	21
6.8	Monthly Index.....	21
6.9	Monthly Index Interval.....	22
6.10	Monthly index calculation.....	22
6.11	Monthly Index Generation Days	22
6.12	DEFINITIONS	22
APPENDIX B: PUBLISHED INDICES DEFINITIONS.....		23

1 Introduction

Natural Gas Exchange Inc. ("NGX") owns and operates an electronic exchange and clearing operation for natural gas, crude oil and electricity spot and forward Products. NGX provides market participants with a fair, transparent and efficient marketplace for trading and a clearing structure that ensures performance of the resulting Transactions.

As a result, NGX has developed certain market price indices for selected Products and delivery locations that may be utilized by market participants. The purpose of this document is to lay out the methodology under which the generation and publication of the price indices are administered.

2 Contracting Party's Agreement

All of the Transactions that are included in the process to determine the price indices are governed by the rules and regulations laid out in a standard form agreement (the "CPA") between NGX and all market participants ("Contracting Parties"). The CPA lays out a standard set of rules that dictate the Transaction process with NGX, including how Contracting Parties become eligible to trade on the Exchange, how Transactions take place, and how performance of Transactions will be assured. Capitalized terms, other than those specifically defined herein, are defined in the CPA.

3 Intellectual Property Rights

NGX owns the right, title and interest in and to the following natural gas indices:

- NGX AB-NIT Same Day Index (formerly NGX Alberta Same Day Price or NGX Alberta Daily Spot Price)
- NGX AB-NIT Month Ahead Index (formerly NGX Alberta One-Month Spot Price)
- NGX AB-NIT Bidweek Index (formerly NGX Alberta Bid-Week One-Month Spot Price)
- NGX AB-NIT Yesterday Index (formerly NGX Alberta Yesterday Price)
- NGX AB-NIT Day Ahead Index (formerly NGX Alberta Next Day Price)
- NGX Spectra Station #2 Day Ahead Index (formerly NGX Station #2 Daily Spot Price)
- NGX GTN Malin Day Ahead Index (formerly NGX Malin Daily Spot Gas Price)
- NGX PG&E Citygate Day Ahead Index (formerly NGX PG&E Citygate Daily Spot Price)
- NGX TCPL-Chippawa Day Ahead Index (formerly NGX Chippawa Daily Spot Price)
- NGX Union-Dawn/TCPL-Chippawa Transport Day Ahead Index (formerly NGX Chippawa Transport Daily Spot Price)
- NGX TCPL-Emerson Great Lakes Day Ahead Index (formerly NGX Emerson/Great Lakes Daily Spot Price)
- NGX TCPL-Empress Day Ahead Index (formerly NGX Empress Daily Spot Price)
- NGX AB-NIT/TCPL-Empress Transport Day Ahead Index (formerly NGX Empress Transport Daily Spot Price)
- NGX TCPL-Iroquois Day Ahead Index (formerly NGX Iroquois Daily Spot Price)
- NGX Union-Dawn/TCPL-Iroquois Transport Day Ahead Index (formerly NGX Iroquois Transport Daily Spot Price)
- NGX TCPL-Niagara Day Ahead Index (formerly NGX Niagara Daily Spot Price)
- NGX Union-Dawn/TCPL-Niagara Transport Day Ahead Index (formerly NGX Niagara Transport Daily Spot Price)

- NGX TCPL-St. Clair Day Ahead Index (formerly NGX St. Clair Dawn Daily Spot Price)
- NGX TCPL-St. Clair/Union-Dawn Transport Day Ahead Index (formerly NGX St. Clair Dawn Transport Daily Spot Price)
- NGX Union-Dawn Day Ahead Index (formerly NGX Union Dawn Daily Spot Price)
- NGX Union-Parkway Day Ahead Index (formerly NGX Union Parkway Daily Spot Price)
- NGX Union-Dawn/Parkway Transport Day Ahead Index (formerly NGX Parkway Transport Daily Spot Price)
- NGX Alberta Flat Electricity RRO Index
- NGX Alberta Extended Peak Electricity RRO Index
- NGX Alberta Super Peak Electricity RRO Index

NGX owns the right, title and interest in and to the following Crude Oil Indices that appear in reports accessible through the NGX Oil Trading Platform, formerly the NTP trading system, entitled “NTP Index Report: NTP Canadian Index (Full)” and “NTP Index Report: NTP Canadian Index (3 day)”:

- | | |
|------------------------|-------------------------------|
| • NGX C5 A3 (ShFB) | formerly known as C5 – Post. |
| • NGX C5 WTI | formerly known as C5 – WTI |
| • NGX LSB A5 (IFPSuSh) | formerly known as LSB – Post |
| • NGX LSB WTI | formerly known as LSB – WTI |
| • NGX M A4 (EFShSu) | formerly known as M – Post. |
| • NGX M WTI | formerly known as M – WTI |
| • NGX SW A4 (IPSuSh) | formerly known as SW – Post. |
| • NGX SW WTI | formerly known as SW – WTI |
| • NGX SW WTI | formerly known as SYN – WTI |
| • NGX WCS A3 (BEF) | formerly known as WCS – Post. |
| • NGX WCS WTI | formerly known as WCS – WTI |

The various price indices listed above (referred to as “Price Index” or collectively referred to as the “Price Indices”) are the sole and exclusive property of NGX. The CPA allows the Contracting Parties to use the Price Indices that are made available to such Contracting Party for its business purposes but except to the extent such information was furnished by or relates solely to the Contracting Party and subject to certain other limited exceptions, the Contracting Party may not publish or otherwise disclose such information publicly. NGX may publish or otherwise disclose or cause to be disclosed such Price Indices.

4 Price Index Generation

4.1 Index Period

The Index Period is the period of time in which trading data is compiled for use in the generation of a particular Price Index. The Index Period may be a full calendar month, or a particular day or set of days, including Bid Week or the Pre-Nomination Crude Oil Trading Period.

Bid Week is defined as the last five Canadian business days of the calendar month, or a suitable representation as published by NGX to account for certain holidays in Canada and in the United States.

The Pre-Nomination Crude Oil Trading Period is defined as the Canadian business days from the first business day of the calendar month until the day before the initial deadline for Notice of

Shipment (the “Initial NOS Deadline”) with the relevant pipeline, typically the 20th calendar day of the month.

4.2 Source Data

To generate the Price Indices, NGX obtains source data files from the NGX Trading System, which includes the Oil Trading Platform. The source data files are extracted directly from the database that is populated by the NGX Trading System. Depending upon the Price Index that is to be generated, the source data file will be limited to only those Transactions within the relevant Products during the Index Period.

The source data file contains the following fields:

Product Name - The name of the Product from which the Price Indices will be derived.

Buyer Company/Trader - The name of the Contracting Party and the specific trader that consummated the purchase Transaction that will be included in the generation of the Price Indices.

Seller Company/Trader - The name of the Contracting Party and the specific trader that consummated the sale Transaction that will be included in the generation of the Price Indices.

Date/Time - The date and time of the Transaction that will be included in the generation of the Price Indices.

Price - The price of energy agreed to in the Transaction that will be included in the generation of the Price Indices.

Daily Contract Quantity - The daily delivery quantity of energy agreed to in the Transaction that will be included in the generation of the Price Indices.

The source data file contains one row for each Transaction that occurs on the NGX Trading System and therefore each trade is only counted once in the generation of the Price Indices.

4.3 Volume Weighted Average

All of the Price Indices utilize volume weighted averages either in the calculation of the Index or as a component of the calculation of the Index. Weighted averages are utilized in an effort to minimize any trading anomalies or distress trading activity that might otherwise distort the data sample.

The weighted average price is calculated using the following methodology.

Multiply the Transaction price by the Transaction quantity for each trade in the source data file.

Sum the product(s) achieved in step (a).

Sum the Transaction quantity for each trade in the source data file.

Divide the sum from step (b) by the sum from step (c).

$$\text{Weighted Average Price} = \frac{\text{Sum (Price x Quantity)}}{\text{Sum (Quantity)}}$$

The weighted average prices are calculated first by automated electronic routines and subsequently cross-checked against a manual calculation for accuracy. Once verified, the weighted average prices are used in the generation of the Price Indices.

4.4 Exclusion of Bilateral Transactions in Natural Gas Indices

Bilateral Transactions are trades entered into directly between two Contracting Parties through the NGX Trading System, pursuant to section 3.1 (g) of the CPA, for the purchase or sale of any Bilateral Product, which trade is cleared and settled in accordance with the terms and conditions of the bilateral agreement between the two Contracting Parties and not cleared and settled through the NGX Clearing System.

Bilateral Transactions that are entered into on the NGX Trading System in accordance with Section 3.1 (f) of the CPA are not included in the calculation of the Price Indices for the underlying Product.

4.5 Inclusion of Bilateral Transaction in Crude Oil Indices

Bilateral Transaction that are entered into on the Oil Trading Platform in accordance with article 3.1(g) of the CPA will be included in the calculation of the Price Indices for the underlying Product.

4.6 Evaluation and Potential Exclusion of Irregular Market Data

NGX will have the right to exclude any market data from inclusion in the source data, which appears to be irregular to the then prevailing market prices, during the period of investigation of any such Transactions. All of such market data will be included in the source data on satisfactory resolution of such investigation, provided that NGX resolves such investigation prior to the opening of the NGX Trading System on the next trading day.

5 Changes to NGX Price Index Methodology Guide

NGX will be entitled from time to time to amend this NGX Price Index Methodology Guide in such manner and with such notice to any person, including any Contracting Party, as it may determine in its sole discretion.

6 Publication

NGX Price Indices are published by NGX and by selected third party publishers. All NGX Natural Gas Indices are published on the NGX website at <http://www.ngx.com/>. Select NGX Price Indices are also available through several publications of Canadian Enerdata Ltd. Crude Oil Indices are published on the Oil Trading Platform.

6.1 Reporting and Analytics

NGX will publish reports from time-to-time to provide information regarding the NGX Price Indices. Such reports are designed to provide users of the Price Indices with the comfort of knowing that there is widespread participation in computing such Price Indices, while maintaining the anonymity of companies participating in the generation of the Price Indices.

7 Price Indices and the CPA

NGX generates Price Indices derived from Transactions in Products offered via the NGX Trading System.

7.1 Exclusion of Trades In Error

If NGX determines that a Trade in Error has occurred on the NGX Trading System under the definition outlined in the CPA, then NGX will exclude such trades in the calculation of the Price Indices. Article 3.7 of the CPA defines the method by which NGX determines if a Trade in Error has occurred in a Cleared Product and outlines the consequences and notification process for such an event. Article 3.1(g) describes the method for excluding bilateral trades in error, which must be agreed to by the parties and communicated to NGX by the earlier of (i) 120 minutes following the entering of the Bilateral Transaction or (ii) 60 minutes following the close of trading on the NGX Trading System on the Trading Day on which the Bilateral Transaction was entered.

7.2 Price Transparency

Only those Transactions that are visible to market participants through the NGX Trading System are included in the calculation of the Price Indices, except as specifically stated below in the NGX Trading System Availability section of this document.

For clarity, Off-Exchange Transactions are not included in the calculation of any NGX Index.

7.3 Linked Deals, Time Trades, and Multiple Month Terms

Transactions defined as Linked Deals, Time Trades, and/or Transactions with multiple month terms (i.e. strip transactions) are not included in the calculation of the Price Indices.

7.4 NGX Trading System Availability

Individual Users

During the operation of the NGX Trading System, a system that connects several hundred remote users, it is possible that certain individual users may experience connectivity problems from time to time. A loss of accessibility to the NGX Trading System, however, will not prevent individuals from consummating trades for inclusion in the Price Indices. In the event that an individual user or an individual group of users cannot access the NGX Trading System to submit orders, NGX is prepared to accept orders via telephone instructions. These orders will be posted by order entry agents internally at NGX based on the instructions provided by the user. Any Transactions that occur which include these orders will also be included in the source data file used to generate the Price Indices as if the users entered the orders in the normal manner.

Aggregate User Base

The NGX Trading System may experience technological problems that require the temporary halting of trading capability or a temporary shut-down of the NGX Trading System. Both of these situations will make it impossible to continue to build the source data file for the indices in the usual manner as described in this document. While these periods of NGX Trading System downtime have traditionally been infrequent and traditionally quite brief, NGX has developed

procedures to ensure that the impact of system outages are not detrimental to the generation of the Price Indices. These procedures will allow NGX to provide order entry, trading and clearing services manually via telephone instructions and confirmations during any system outages. Trades consummated on the NGX Trading System or via telephone orders during these system outages will be included in the resulting source data file used to generate the Price Indices. The Transactions will then be entered into the NGX Trading System once it is again available and all problems have been resolved. Any Transactions that were consummated manually during the outage, and therefore included in the source data file, will be published by NGX to ensure transparency.

7.5 Real-Time Price Indices

NGX provides running weighted averages of trading activity that will be considered for inclusion in the source data files for the Price Indices. These running weighted averages are provided as a source of information to assist market participants in making timely and informed decisions with respect to their indexed portfolios. The Real-time Price Indices should not be construed as the Price Indices themselves, but rather a representation of the trading activity that will comprise the verified and published Price Indices.

7.6 Not Fair Market Value

NGX does not make any representation to any person that the Price Indices derived from market activity on the NGX Trading System represents fair market value or is indicative of fair market value.

7.7 Trading Irregularities

Pursuant to the terms and conditions of the CPA, each Contracting Party has agreed not to engage in any trading irregularities, whether alone or in association with others, that may comprise manipulative activity or activity aimed at manipulation of natural gas prices.

7.8 Limitation of Liability

Neither NGX nor its agents, directors, officers and employees shall be liable to the Contracting Party for any losses, costs or expenses arising from any matter relating to the calculation, methodology of calculation, compilation, or publication of any Price Indices which are calculated by NGX which are used for the settlement of any Transaction. NGX does not make any express or implied warranties in respect of the results which may be achieved through the use of any of such Price Indices or in respect of the value of any of such Price Indices at any given time, nor that any settlement prices established are at a fair, proper or correct amount. Neither NGX nor its agents, directors, officers and employees shall, under any circumstances, be liable for errors or deficiencies in the calculation, methodology of calculation or publication of any of such Price Indices nor shall NGX be obligated to provide notice of, or publish, errors in any of such Price Indices in any manner.

Products, which are settled pursuant to the terms of the CPA on the basis of settlement prices reported by any entity other than NGX, are not issued, endorsed, sold or promoted by such entity, nor has such entity passed on their legality or suitability. Neither NGX, nor its respective agents, directors, officers and employees shall be liable to the Contracting Party for any losses, costs, expenses arising from any matter relating to the source or accuracy of the underlying data, calculation, methodology of calculation, compilation, or publication of any Price Indices which are used for the settlement of any Transaction and which are derived from any publication

or any other third party index. NGX does not make any express or implied warranties in respect to the results which may be achieved through the use of any of the Price Indices or in respect of the values of any of the indices at any given time, nor that any settlement prices so established are at a fair, proper or correct amount. Neither NGX, nor its respective agents, directors, officers and employees shall, under any circumstances, be liable for errors or deficiencies in the calculation, methodology of calculation, compilation or publication of any of the indices nor shall the NGX be obligated to provide notice of, or publish, errors in any of the indices in any manner. Neither NGX nor any of its agents, directors, officers and employees shall be liable to the Contracting Party for any losses, damages, costs or expenses arising from any failure of publisher of such Price Indices to establish settlement prices or report settlement prices for their contracts at a fair, proper or correct amount.

APPENDIX A: PRICE INDEX METHODOLOGY

1 NGX AB-NIT Same Day Indices

NGX AECO C and NIT Daily Spot Gas Price								
Calendar Date	Inst. Code	Quantity Traded (TJ/Day)	Number of Trades	Price (\$/GJ)			Exchange Rate \$US/\$CAD	Weighted Average (\$US/MM)
				High	Low	Weighted Average		
Wednesday, September 1, 2004	SD-Sep 01	1,408.70	176	5.43	5.21	5.3987	0.7652	4.3585
Thursday, September 2, 2004	SD-Sep 02	1,480.20	194	5.185	4.99	5.1014	0.7695	4.1417
Friday, September 3, 2004	SD-Sep 03	345.1	45	4.845	4.69	4.7414	0.7689	3.8464
Friday, September 3, 2004	F4-Sep 03	1,070.70	152	4.81	4.67	4.7499	0.7689	3.8533
Friday, September 3, 2004	SA3-Sep 04	184.3	19	4.81	4.73	4.7533	0.7689	3.856
Friday, September 3, 2004	SA4-Sep 04	319.7	41	4.845	4.7	4.7539	0.7689	3.8565
Friday, September 3, 2004	Weekend #	1,070.70	152	4.81	4.67	4.7499	0.7689	3.8533
Saturday, September 4, 2004	SD-Sep 04	184.5	40	5.25	4.9	5.1417	0.7689	4.1711
Sunday, September 5, 2004	SD-Sep 05	219.3	36	5.24	5	5.1622	0.7689	4.1877
Monday, September 6, 2004	SD-Sep 06	244.5	47	4.95	4.85	4.9123	0.7689	3.985
Tuesday, September 7, 2004	SD-Sep 07	1,489.70	175	5.12	4.9	5.0168	0.7766	4.1105
Wednesday, September 8, 2004	SD-Sep 08	1,212.70	147	5.35	5.1	5.2645	0.7751	4.3052
Thursday, September 9, 2004	SD-Sep 09	1,347.10	170	5.04	4.95	5.0014	0.7767	4.0985
Friday, September 10, 2004	SD-Sep 10	439.9	63	4.99	4.71	4.8481	0.7766	3.9723
Friday, September 10, 2004	F3-Sep 10	956	142	4.96	4.725	4.8533	0.7766	3.9766
Friday, September 10, 2004	SA2-Sep 11	108	13	4.87	4.73	4.7939	0.7766	3.9279
Friday, September 10, 2004	SA3-Sep 11	369.9	50	4.96	4.76	4.8931	0.7766	4.0092
Friday, September 10, 2004	Weekend #	956	142	4.96	4.725	4.8533	0.7766	3.9766
Saturday, September 11, 2004	SD-Sep 11	215.3	42	5.08	4.77	4.9127	0.7766	4.0253
Sunday, September 12, 2004	SD-Sep 12	137.4	25	4.85	4.7	4.7987	0.7766	3.9318
Monday, September 13, 2004	SD-Sep 13	1,161.20	152	5.28	5.04	5.1669	0.7691	4.1926
Tuesday, September 14, 2004	SD-Sep 14	1,169.10	157	5.14	5	5.0739	0.7742	4.1445
Wednesday, September 15, 2004	SD-Sep 15	1,365.20	178	5.06	4.93	5.0009	0.7699	4.0622
Thursday, September 16, 2004	SD-Sep 16	1,255.50	183	5	4.76	4.8796	0.7756	3.993
Friday, September 17, 2004	SD-Sep 17	204.6	32	5.48	5.01	5.2804	0.7694	4.2864
Friday, September 17, 2004	F3-Sep 17	995.7	168	5.48	4.9	5.1062	0.7694	4.145
Friday, September 17, 2004	F4-Sep 17	100	10	5.465	5.37	5.4265	0.7694	4.405
Friday, September 17, 2004	SA2-Sep 18	122.5	16	5.4	5	5.0881	0.7694	4.1303
Friday, September 17, 2004	SA3-Sep 18	140.4	20	5.38	4.96	5.0322	0.7694	4.0849
Friday, September 17, 2004	Weekend #	995.7	168	5.48	4.9	5.1062	0.7694	4.145
Saturday, September 18, 2004	SD-Sep 18	294.5	44	6.3	5.6	5.9269	0.7694	4.8112
Sunday, September 19, 2004	SD-Sep 19	183.9	38	5.85	5.4	5.6567	0.7694	4.5919
Monday, September 20, 2004	SD-Sep 20	1,272.70	169	5.85	5.42	5.5511	0.7727	4.5255
Tuesday, September 21, 2004	SD-Sep 21	1,380.10	187	5.965	5.6	5.7242	0.7762	4.6877
Wednesday, September 22, 2004	SD-Sep 22	1,306.90	173	5.9	5.75	5.8091	0.7802	4.7818
Thursday, September 23, 2004	SD-Sep 23	1,128.90	145	5.71	5.53	5.631	0.7824	4.6483
Friday, September 24, 2004	SD-Sep 24	259.4	43	5.52	5.35	5.4324	0.7838	4.4923
Friday, September 24, 2004	F3-Sep 24	988.3	153	5.46	5.3	5.3721	0.7838	4.4425
Friday, September 24, 2004	SA2-Sep 25	70.3	11	5.375	5.3	5.3138	0.7838	4.3943
Friday, September 24, 2004	SA3-Sep 25	328.4	49	5.45	5.29	5.379	0.7838	4.4482
Friday, September 24, 2004	Weekend #	988.3	153	5.46	5.3	5.3721	0.7838	4.4425
Saturday, September 25, 2004	SD-Sep 25	63	14	5.55	5.47	5.5126	0.7838	4.5587
Sunday, September 26, 2004	SD-Sep 26	132.5	28	5.57	5.35	5.4668	0.7838	4.5208
Monday, September 27, 2004	SD-Sep 27	1,101.20	154	5.29	5.17	5.2372	0.7851	4.3381
Tuesday, September 28, 2004	SD-Sep 28	1,370.80	185	5.85	5.36	5.5264	0.784	4.5712
Wednesday, September 29, 2004	SD-Sep 29	1,397.50	180	6.5	6	6.1839	0.7859	5.1275
Thursday, September 30, 2004	SD-Sep 30	1,081.70	137	6.1	5.35	5.7753	0.7912	4.821
(1) Weighted		28,863.80	3,974	6.5	4.67	5.3013		4.3424
(1a) Arithmetic						5.2711		4.3149
(2) Weighted		24,853.10	3,359	6.5	4.69	5.3473		4.3814
(2a) Arithmetic						5.3045		4.343
(3) Weighted		27,188.90	3,660	6.5	4.67	5.3022		4.3444
(3a) Arithmetic						5.269		4.3169
(4) Weighted		32,270.30	4,427	6.5	4.67	5.2483		4.2978
(4a) Arithmetic						5.2186		4.2731
(5) Weighted		35,032.00	4,859	6.5	4.67	5.2302		4.2823
(5a) Arithmetic						5.2112		4.2671

Table 1 – Sample “Daily Spot Gas Price at AECO C & Nova Inventory Transfer” Table

NGX generates various Price Indices from the trading activity in the current intraday ("Same Day") and other short-term physical Products at NGX AB-NIT. Trading information from such Products is used to populate the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table", which is published by NGX and in the monthly edition of the Canadian Gas Price Reporter "CGPR".

1.1 Index Diversity

The methodology by which the various Price Indices are established is contained in the summaries in section 1.4 below. The varied array of methodologies used in many of the Price Indices are the result of the varied and diverse set of market participants that utilize them and may also be a result of the gradual changes that the marketplace has made in the way that they enter into Transactions in the spot markets.

1.2 Weekend#

The methodologies in section 1.4 below utilize the concept of the "Weekend#", which refers to a row contained in the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table". Weekend# is a value that is derived from trading on the Friday immediately preceding the weekend in the Product (the default Product is the "F3") that represents the daily gas delivery for the current Friday to the following Sunday (ie. A three-day Product that begins on the current Friday).

1.3 Month ending on a weekend or Statutory and Other Holidays

Various Products may be substituted as a suitable replacement for the default Product ("F3") for the Weekend# during certain holidays in Canada and in the United States or because the month begins or ends on a weekend. Prior to any change that may significantly impact trading in Canada, which would require a change to the default for the Weekend#, NGX will publish a revised methodology regarding how the holiday will be treated with respect to the generation of the Indices.

1.4 Methodologies

NGX AB-NIT Same Day Index 1

The *NGX AB-NIT Same Day Index 1* ("Index 1") is determined by calculating the volume-weighted average of all the rows contained in the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table". This includes all rows representing Same Day Product Transactions and rows representing the Weekend#.

NGX AB-NIT Same Day Index 1A

The *NGX AB-NIT Same Day Index 1A* ("Index 1A") is determined by calculating the arithmetic average of the weighted average rows used in Index 1.

NGX AB-NIT Same Day Index 2

The *NGX AB-NIT Same Day Index 2* ("Index 2") is determined by calculating the volume-weighted average of the rows representing Same Day Product Transactions contained in the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table". This index *excludes* the Weekend# rows.

NGX AB-NIT Same Day Index 2A

The *NGX AB-NIT Same Day Index 2A* ("Index 2A") is determined by calculating the arithmetic average of the weighted average rows used in Index 2. In the event that the CGPR does not report the required information to determine the *NGX AB-NIT Same Day Index 2A* hereunder, or the *NGX AB-NIT Same Day Index 2A* is otherwise not determinable, the price will be the price determined by Exchange based on the arithmetic average of the daily weighted average of all same day (IA-SD) Physical Transactions with reference to the most comparable trades executed through the *NGX Trading System* at *NGX AB-NIT*.

NGX AB-NIT Same Day Index 3

The *NGX AB-NIT Same Day Index 3* ("Index 3") is determined by calculating the volume-weighted average of selected rows contained in the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table". The selected rows are those that represent Same Day Product Transactions on business days, and the Weekend# row once for each weekend.

NGX AB-NIT Same Day Index 3A

The *NGX AB-NIT Same Day Index 3A* ("Index 3A") is determined by calculating the arithmetic average of the weighted average rows used in Index 3.

NGX AB-NIT Same Day Index 4

The *NGX AB-NIT Same Day Index 4* ("Index 4") is determined by calculating the volume-weighted average of selected rows contained in the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table". The selected rows are those that represent Same Day Product Transactions on business days, and the Weekend# row as a proxy for each day of the weekend. It is important to note that the Weekend# is typically counted twice in this calculation, once for Saturday and again for Sunday.

NGX AB-NIT Same Day Index 4A

The *NGX AB-NIT Same Day Index 4A* ("Index 4A") is determined by calculating the arithmetic average of the weighted average rows used in Index 4. In the event that CGPR or Exchange does not report the required information to determine the *NGX AB-NIT Same Day Index 4A* hereunder, or the *NGX AB-NIT Same Day Index 4A* is otherwise not determinable, the price will be the price determined by Exchange based on the arithmetic average of:

- A. for each Gas Day (Monday to Friday, inclusive) the daily weighted average for all same day (IA-SD) Physical Transactions executed through the *NGX Trading System* at *NGX AB-NIT*; and
- B. the weighted average for weekend (IA-SA2) Physical Transactions executed through the *NGX Trading System* as a proxy for each Saturday and Sunday at *NGX AB-NIT*.

NGX AB-NIT Same Day Index 5

The *NGX AB-NIT Same Day Index 5* ("Index 5") is determined by calculating the volume-weighted average of selected rows contained in the "Daily Spot Gas Price at AECO C & Nova Inventory Transfer Table". The selected rows are those that represent Same Day Product Transactions Monday through Thursday, and the Weekend# row as a proxy for Friday and for each day of the weekend. It is important to note that the Weekend# is typically counted three times in this calculation, once for Friday, once for Saturday and again for Sunday.

NGX AB-NIT Same Day Index 5A

The *NGX AB-NIT Same Day Index 5A* ("Index 5A") is determined by calculating the arithmetic average of the weighted average rows used in Index 5. In the event that the CGPR or Exchange does not report the required information to determine the *NGX AB-NIT Same Day Index 5A* hereunder, or the *NGX AB-NIT Same Day Index 5A* is otherwise not determinable, the price will be the price determined by Exchange based on the arithmetic average of:

- A. for each Gas Day (Monday to Thursday, inclusive) the daily weighted average for all same day (IA-SD) Physical Transactions executed through the NGX Trading System at NGX AB-NIT; and
- B. the weighted average for all weekend (IA-F3) Physical Transactions executed through the NGX Trading System as a proxy for Friday, Saturday or Sunday plus any Canadian statutory holidays that are included in the weekend Physical Transactions at NGX AB-NIT.

NGX AB-NIT Same Day Index 5A US

The *NGX AB-NIT Same Day Index 5A US* ("Index 5A US") is determined by converting the Index 5A to US Dollars/MMBtu using the Bank of Canada Noon Day Rate.

2 NGX AB-NIT Month Ahead Indices

NGX generates three Price Indices from the trading activity in the Product that represents daily gas delivery from the first day of the following month to the last day of the following month (i.e. "Near Month", "Prompt Month", or "One-Month Spot") at NGX AB-NIT.

2.1 Index Data Source

All implied spread Transactions in the underlying Product will be included in the calculation of the Month Ahead Indices however all spread legs generated by the NGX Trading System as a result of time spread Transactions in the underlying Product will not be included in the calculation of the Month Ahead Indices.

2.2 Methodologies

NGX AB-NIT Month Ahead Index

The *NGX AB-NIT Month Ahead Index* is determined by calculating the volume-weighted average of all the Transactions during a calendar month in the Product that represents gas delivery for the following calendar month. In the event that CGPR or Exchange does

not report the required information to determine the NGX AB-NIT Month Ahead Index hereunder, or the NGX AB-NIT Month Ahead Index is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of Intra-Alberta gas bought and sold for the entire delivery Month on the TCPL Alberta System based on agreements made during the Month immediately prior to the delivery Month.

NGX AB-NIT Month Ahead Index US

The NGX AB-NIT Month Ahead Index US is determined by converting the NGX AB-NIT Month Ahead Index to US Dollars/MMBtu using the Bank of Canada Noon Day Rate as published on the first business day of the calendar month of the NGX AB-NIT Month Ahead Index US.

NGX AB-NIT Bidweek Index

The NGX AB-NIT Bidweek Index is determined by calculating the volume-weighted average of all the Transactions during the last five Canadian business days during a calendar month ("Bid Week") in the Product that represents gas delivery for the following calendar month.

2.3 Statutory and Other Holidays

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices.

3 NGX Daily Spot Gas Price Indices

NGX generates daily spot price indices from the on screen daily trading activity, in the next-day D1 ("Spot Day") Product on Monday to Thursday and the on screen daily trading activity, in the SA3 ("Weekend") Product traded on Friday. These Products are the index source Products.

3.1 Index Data Source

For the following Price Indices all of the on screen transactional data that occurs in the index source Products, from market opening until the Product closes for the trading day, will qualify to be used in the calculation of the Index.

- NGX Spectra Station #2 Day Ahead Index (formerly NGX Station #2 Daily Spot Price)
- NGX GTN Malin Day Ahead Index (formerly NGX Malin Daily Spot Gas Price)
- NGX PG&E Citygate Day Ahead Index (formerly NGX PG&E Citygate Daily Spot Price)
- NGX TCPL-Chippawa Day Ahead Index (formerly NGX Chippawa Daily Spot Price)
- NGX Union-Dawn/TCPL-Chippawa Transport Day Ahead Index (formerly NGX Chippawa Transport Daily Spot Price)
- NGX TCPL-Emerson Great Lakes Day Ahead Index (formerly NGX Emerson/Great Lakes Daily Spot Price)
- NGX TCPL-Empress Day Ahead Index (formerly NGX Empress Daily Spot Price)
- NGX AB-NIT/TCPL-Empress Transport Day Ahead Index (formerly NGX Empress Transport Daily Spot Price)
- NGX TCPL-Iroquois Day Ahead Index (formerly NGX Iroquois Daily Spot Price)

- NGX Union-Dawn/TCPL-Iroquois Transport Day Ahead Index (formerly NGX Iroquois Transport Daily Spot Price)
- NGX TCPL-Niagara Day Ahead Index (formerly NGX Niagara Daily Spot Price)
- NGX Union-Dawn/TCPL-Niagara Transport Day Ahead Index (formerly NGX Niagara Transport Daily Spot Price)
- NGX TCPL-St. Clair Day Ahead Index (formerly NGX St. Clair Dawn Daily Spot Price)
- NGX TCPL-St. Clair/Union-Dawn Transport Day Ahead Index (formerly NGX St. Clair Dawn Transport Daily Spot Price)
- NGX Union-Dawn Day Ahead Index (formerly NGX Union Dawn Daily Spot Price)
- NGX Union-Parkway Day Ahead Index (formerly NGX Union Parkway Daily Spot Price)
- NGX Union-Dawn/Parkway Transport Day Ahead Index (formerly NGX Parkway Transport Daily Spot Price)

For the **NGX AB-NIT Day Ahead Index** only the on screen transactional data that occurs in the index source Products, from Market opening until 10:30 am Mountain Time, Monday to Friday, will qualify to be used in the calculation of the Index.

Location spread Transaction legs are only included in the calculation of Transport Day Ahead Indices, they are not included in the calculation of non-Transport Day Ahead Indices.

3.2 Index Diversity

These Price Indices follow the methodology as outlined below, using the NGX Union-Dawn Day Ahead Index Table below as an example.

NGX Union Dawn Daily Spot Gas Price								
Trading Date	Clearing Date	Product ID	Product Range	Total Quantity Traded (BBtu)	Number of Trades	Price (\$US/MMBtu)		
						High	Low	Weighted Average
Friday, March 31, 2006	Apr-1 - Apr-3	SA3-Apr 01	Saturday - Monday	704.8	91	6.97	6.875	6.9128
Friday, March 31, 2006		WKD	SA3-Apr 01	2,114.40	91	6.97	6.875	6.9128
Monday, April 3, 2006	4-Apr	D-Apr 04	Tuesday	908.3	87	7.47	7	7.2942
Tuesday, April 4, 2006	5-Apr	D-Apr 05	Wednesday	919.5	85	7.295	7.08	7.241
Wednesday, April 5, 2006	6-Apr	D-Apr 06	Thursday	836.5	75	7.15	6.99	7.0403
Thursday, April 6, 2006	7-Apr	D-Apr 07	Friday	691.7	64	7.32	7.08	7.2392
Friday, April 7, 2006	Apr-8 - Apr-10	SA3-Apr 08	Saturday - Monday	718	78	6.995	6.9	6.961
Friday, April 7, 2006		WKD	SA3-Apr 08	2,154.00	78	6.995	6.9	6.961
Monday, April 10, 2006	11-Apr	D-Apr 11	Tuesday	1,037.60	106	6.87	6.74	6.8124
Tuesday, April 11, 2006	12-Apr	D-Apr 12	Wednesday	832.2	83	7.02	6.85	6.9727
Wednesday, April 12, 2006	13-Apr	D-Apr 13	Thursday	771.8	76	6.88	6.72	6.7875
Thursday, April 13, 2006	Apr-14 - Apr-17	F4-Apr 14	Friday - Monday	754.5	79	7.01	6.54	6.6679
Thursday, April 13, 2006		WKD	F4-Apr 14	3,018.00	79	7.01	6.54	6.6679

Monday, April 17, 2006	18-Apr	D-Apr 18	Tuesday	521.5	63	7.36	7.135	7.1805
Tuesday, April 18, 2006	19-Apr	D-Apr 19	Wednesday	562.8	65	7.73	7.52	7.6312
Wednesday, April 19, 2006	20-Apr	D-Apr 20	Thursday	530.6	64	8.12	7.78	7.9432
April 2006 Totals:				14,898.90	1,016	8.12	6.54	7.0218

Table 2 – Sample “NGX Union Dawn Daily Spot Gas Price” Table

3.3 WKD

The methodology in section 3.4 below utilizes the concept of the “WKD”, which refers to a row contained in the respective “Daily Spot Gas Price Table”.

WKD Total Quantity Traded is a value that is derived from qualifying trading, on the day immediately preceding the weekend, in the index source Product (the default Product is the “SA3”) multiplied by the number of days represented. This quantity represents the total qualifying quantity for the weekend (the default would be the qualifying quantity for Saturday, Sunday and Monday).

3.4 Methodologies

The daily spot gas price index tables such as the NGX Union-Dawn Day Ahead Index table illustrated above provides a summary of the index source Product qualifying Transactions that comprise the Price Index. A volume-weighted average is calculated for each row.

The monthly total for the daily spot gas price indices are determined by calculating the arithmetic average of the daily Product, weighted average rows (typically traded on Monday to Thursday), plus the weighted average of the WKD row typically traded on Friday.

For Clarification, the row-representing weekend trading activity that occurred on Friday is not counted in the calculation. But the WKD row (representing the daily volume traded on Friday times the number of proxy days) is used in the calculation.

3.5 Statutory and Other Holidays

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices. Typically this will entail a substitution of the index source Product that will represent the WKD in the table. Various Products may be substituted as a suitable replacement for the default Product (“SA3”) for the WKD during certain holidays in Canada and in the United States or because the month begins or ends on a weekend.

4 NGX AB-NIT Same Day and NGX AB-NIT Yesterday Indices

NGX generates various Price Indices from the trading activity in the current intraday (“SD”) and yesterday’s intraday (“YD”) Products. Trading information from such Products is used to populate the tables using the same methodology for the following Price Indices:

- NGX AB-NIT Same Day Index
- NGX AB-NIT Yesterday Index

4.1 Index Diversity

These Price Indices follow the methodology as outlined below, using the NGX Intra-Alberta "YD Price Index as an example

Natural Gas Exchange					
AECO/NGX Intra-Alberta YD Index Values					
Current Month Cumulative Data					
Date	Settlement	High	Low	Weighted Average	Volume Per Day
Apr-01	6.290	6.350	6.195	6.2247	146.7
Apr-02	6.535	6.535	6.300	6.4243	327.0
Apr-03	6.840	7.000	6.390	6.6197	263.3
Apr-04	6.650	6.720	6.540	6.6432	196.5
Apr-05	6.500	6.520	6.380	6.4334	184.9
Apr-06	6.370	6.580	6.350	6.5057	278.0
Apr-07	6.050	6.150	6.000	6.0924	151.7
Apr-08	5.900	6.030	5.880	5.9268	86.5
Apr-09	5.880	6.100	5.850	5.9451	202.0
Apr-10	5.930	6.060	5.890	5.9815	234.7
Apr-11	5.950	6.110	5.900	6.0198	190.1
Apr-12	5.850	5.950	5.830	5.8714	160.3
Apr-13	6.100	6.100	5.630	5.8331	185.1
Apr-14	6.500	6.500	6.150	6.2786	182.1
Apr-15	6.330	6.400	6.230	6.3206	224.7
Apr-16	6.205	6.250	6.190	6.2111	195.8
Apr-17	6.330	6.400	6.170	6.2283	242.2
Apr-06	6.261	N/A	N/A	6.2451	3,451.6

Table 3 – Sample "NGX Intra-Alberta YD Price" Table

4.2 Proxy

There is no proxy used in the calculation of these indices, as NGX Trading System is available for trading 365 days a year.

4.3 Methodologies

These Price Indices follow the methodology as outlined below, using the NGX AB-NIT Yesterday Index as an example

The NGX AB-NIT Yesterday Index table illustrated above provides a summary of the Transactions that occurred for yesterday's gas day that comprise the NGX AB-NIT Yesterday Index. The table contains one row representing trades in the yesterday's day Product for each day from Monday to Sunday, a volume-weighted average is calculated for each row.

The NGX AB-NIT Same Day and NGX AB-NIT Yesterday Indices are determined by calculating the arithmetic average of all of the weighted average rows in the applicable table for a specific period.

4.4 Statutory and Other Holidays

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices.

5 NGX Crude Oil Indices

NGX generates Price Indices from the trading activity in certain NGX Product(s) in the month prior to the Delivery Period for those Products. These Indices are calculated over two Index Periods:

- A. Full Index Calculation Period - means the period commencing on the first Trading Day of the month immediately prior to the Delivery Period and ending on the Initial NOS Deadline for the relevant pipeline.
- B. Three Day Index Calculation Period – means the last three business days of the Full Index Calculation Period.

5.1 Index Data Source

For the following Price Indices all of the onscreen transaction data (other than Trades in Error) in the index-generating Products during the relevant Index Period will qualify to be used in the calculation of the relevant Index.

The index-generating Products are the grades referred to in the name of the relevant Index.

- NGX C5 A3 (ShFB)
 - Includes differential to Posting at Federated, Fort Sask, Peace, Pembina, and Rimbey
- NGX C5 WTI
 - Includes differential to WTI at Federated, Fort Sask, Peace, Pembina, and Rimbey
- NGX LSB A5 (IFPSuSh)
 - Includes differential to Posting at Enbridge and Westspur
- NGX LSB WTI
 - Includes differential to WTI at Enbridge and Westspur
- NGX M A4 (EFShSu)
 - Includes differential to Posting at Westspur
- NGX M WTI
 - Includes differential to WTI at Westspur
- NGX SW A4 (IPSuSh)
 - Includes differential to Posting at Bonnie Glen, Enbridge, Federated, Peace, Pembina and Rainbow
- NGX SW WTI
 - Includes differential to WTI at Bonnie Glen, Enbridge, Federated, Peace, Pembina and Rainbow
- NGX SYN WTI
 - Includes differential to WTI at Alberta Oilsands Pipe Line
- NGX WCS A3 (BEF)
 - Includes differential to Posting at Husky

- NGX WCS WTI
 - Includes differential to WTI at Husky

5.2 Statutory and Other Holidays

Prior to any Canadian statutory holiday, or prior to any U.S. holiday that significantly impacts trading in Canada, NGX publishes a methodology regarding how the holiday will be treated with respect to the generation of the Indices.

5.3 Example

Here is an example of a report in which some of the Crude Oil Indices are published:

NTP Index Report - Windows Internet Explorer

https://trading.netthruput.com/secure/rpt?rpt=R108nind=NTP&startyr=2009&startmo=01&CID=342RSD17XWn0D1BxZrpfLpyRgJxTJW3bYVZQ

NTP Index Report

NTP Index Report

Full
NTP Canadian Index - 2009
Completed Trades By Delivery Month - 1st of the Month to NOS

Crude Type	Jan. Index	Jan. BPD	# Trds.	Feb. Index	Feb. BPD	# Trds.	March Index	March BPD	# Trds.	April Index	April BPD	# Trds.	May Index	May BPD	# Trds.	June Index	June BPD	# Trds.
CS - Post.	\$3.78	28.0	111	\$2.55	29.8	93	\$2.03	24.7	106	\$1.03	11.7	42						
CS - WTI	N/R			N/R			\$2.25	2	1	\$4.46	9.0	32						
LSB - Post.	\$7.75	3.3	8				\$2.64	9.8	17	\$1.30	5.2	8						
LSB - WTI	\$7.23	14.2	26	\$2.80	16.9	29	\$-7.70	11.9	20	\$-1.79	16.3	26						
M - Post.	\$5.50	5	1	N/R			\$2.85	1.7	4									
M - WTI	\$7.68	18.6	30	\$3.95	17.0	30	\$-2.12	14.3	24	\$-3.38	12.3	29						
SW - Post.	\$9.96	7.1	14	\$1.01	6.2	12	\$2.47	16.0	28	\$2.34	15.4	18						
SW - WTI	\$6.09	87.8	137	\$1.96	69.6	97	\$1.20	\$2.4	103	\$4.45	71.1	110						
SYN - WTI	\$2.55	31.7	55	\$3.39	35.4	43	\$4.99	68.0	83	\$1.04	72.0	100						
WCS - Post.	N/R			N/R			\$2.23	2.0	1									
WCS - WTI	\$-11.95	137.0	215	\$-7.55	210.0	244	\$-7.30	\$2.9	115	\$-5.19	130.4	215						

Crude Type	July Index	July BPD	# Trds.	Aug. Index	Aug. BPD	# Trds.	Sept. Index	Sept. BPD	# Trds.	Oct. Index	Oct. BPD	# Trds.	Nov. Index	Nov. BPD	# Trds.	Dec. Index	Dec. BPD	# Trds.
CS - Post.																		
CS - WTI																		
LSB - Post.																		
LSB - WTI																		
M - Post.																		
M - WTI																		
SW - Post.																		
SW - WTI																		
SYN - WTI																		
WCS - Post.																		
WCS - WTI																		

NTP Index and Daily NTP Settlement Methodology

Copyright 2009 NetThruPut Inc.

For questions please email helpdesk@netthruput.com or call the Help Desk @ (403) 538-3535

Done

6 NGX Alberta Electricity RRO Indices

The NGX Alberta Electricity RRO Index generates three near month indices from "On Screen" market activity that occurs during the NGX regular trading day.

- NGX Alberta Flat Electricity RRO Index
- NGX Alberta Extended Peak Electricity RRO Index
- NGX Alberta Super Peak Electricity RRO Index

The NGX Alberta Electricity RRO Index is unique in that it incorporates Transactional activity as well as bid/offer spreads to determine the index. It was created to ensure a fair representative index price is available, even on a market day when there are no Transactions. All implied

spread Transactions and implied spread bids or offers in the underlying Product will be included in the calculation of the NGX Alberta Electricity RRO Indices however all spread legs generated by the NGX Trading System as a result of time spread Transactions in the underlying Product will not be included in the calculation of the NGX Alberta Electricity RRO Indices.

6.1 Combined Index Generation

The Daily Combined Index Price is made up of a time weighted average of qualifying spreads and a weighted average of on screen trades, which occur on a specific trading day. Each trading day, a daily post price and daily post volume are calculated to a time weighted average and then combined with the weighted average of NGX Transactions for that day. This result is a weighted average Daily Combined Index Price for that day.

6.2 Qualifying Spreads

Only spreads made up of the best bid and best offer and that meet the predetermined criteria will be included when calculating the daily post price and daily post volume. These qualifying spreads must meet the requirements set out in Table 1.0.

Qualifying Spread Requirements

Spread Requirement	Baseload (FLAT)	Extended Peak	Super Peak
Minimum bid/offer Volume	5 MWh	5 MWh	5 MWh
Max Spread Post Volume per Day	25 MWh	25 MWh	25 MWh
Max Spread	\$2.00/MWh	\$5.00/MWh	\$10.00/MWh
Min Minutes per Day	60 Minutes	60 Minutes	60 Minutes
Weighted Average Time	Fraction of hours	Fraction of hours	Fraction of hours
Weighted Average Volume	Lesser of bid/offer	Lesser of bid/offer	Lesser of bid/offer
No Qualifying Spreads	Use Volume of 0 for the day	Use Volume of 0 for the day	Use Volume of 0 for the day

To determine the daily post price, only bid/offer spreads with a minimum volume of 5 MWh will be used. The bid/offer spread must be equal to or less than \$2.00/MWh, \$5.00/MWh or \$10.00/MWh in the Baseload, Extended Peak and Super Peak products respectively, for the spread to qualify. Finally, all the qualifying spreads in the day must have a total duration of 60 minutes for the time weighted average post price to be eligible for inclusion into the index; otherwise a volume of 0 will be used. If there are qualifying spreads in the day in excess of 25 MWh, a maximum of 25 MWh will be used when calculating the weighted average index price.

6.3 Qualifying Trades

All on screen trades that occur during a NGX regular trading day are used in the calculation of the Trade Data Weighted average

TRADE REQUIREMENT			
Trade Requirement	Baseload (FLAT)	Extended Peak	Super Peak
Max Daily Trade Volume	100 MWh	100 MWh	100 MWh
No Trades	Use Volume of 0 for the day	Use Volume of 0 for the day	Use Volume of 0 for the day

When there are over 100 MWh of trades in the day, all of the trade volumes will be used to calculate the weighted trade price, but a maximum of 100 MWh will be used in the calculation of The Daily Combined Index Price.

Note: This ensures that if there are greater than 25 MWh of spreads and trades on a given day, the trades are more heavily weighted when calculating the index.

6.4 Calculating the Daily Post Price Using Spreads:

The daily post price is calculated using a time weighted average as follows:

a) Spread duration in Hours = $\frac{\text{End Time} - \text{Start Time (sec)}}{3600}$

60 min/hr * 60 sec/min

b) Post volume = Spread duration in Hours (see above) * Min (bid volume, offer volume)

c) Post price = Midpoint of the bid/offer spread

d) Time weighted average daily index = $\frac{\text{SUM (Post volume * Post price)}}{\text{SUM (Post Volume)}}$

Examples of Calculating a Spread Daily Post Price (Baseload power market):

Date	Month	Start Time	End Time	Spd Dur	Bid Vol	Offer Vol	Best Bid Price	Best Offer Price	Spread	Post Vol	Post Price	Daily Index
Day 1	June 06	8:45:00	10:50:00	2.08 *	25	25	67.50	69.00	1.50	52.08 **	68.25 ***	25 MWh @ \$68.25 ****
Day 2	June 06	10:44:00	11:44:00	1.00	5	10	67.00	68.50	1.50	5.00*	67.75	10.83 MWh @ \$67.08 ***
Day 2	June 06	14:50:00	16:00:00	1.17	5	5	65.50	67.50	2.00	5.83*	66.50	
Day 3	June 06	11:35:30	11:45:45	0.17	5 *	15	66.00	67.00	1.00	0.85	66.50	12.65 MWh @ \$66.50 **
Day 3	June 06	11:45:45	12:56:45	1.18	10 *	15	66.00	67.00	1.00	11.80	66.50	
Day 4	June 06	9:06:30	9:10:30	0.067*	10	15	66.10	66.45	0.35	0.67	66.275	0 Volume used to calculate the daily index
Day 4	June 06	10:15:45	10:37:00	0.35*	15	10	66.25	66.50	0.25	3.54	66.375	
Day 4	June 06	11:02:10	11:21:20	0.32*	15	5	66.35	66.65	0.30	1.60	66.50	
Day 4	June 06	11:34:10	11:56:40	0.38	5	10	65.00	67.15	2.15 **			

Day 1:

* Spread Duration = 2 hrs and 5 minutes duration = 125 minutes/60 minutes/hour = 2.08333

** Post Volume = Min (bid volume, offer volume) * Spread Duration = 25 MW * 2.08333 = 52.08

*** Post Price = Midpoint (bid price, offer price) = \$68.25

**** The post volume for the day is 52.08, which is greater than the maximum allowed, 25 MWh. Therefore, use the maximum of 25 MWh for post volume.

Day 2:

The Day 2 post price volume is the sum of the volumes of the qualifying spreads as follows:

Spread Duration = 1.00 hr + 1.17 hr = 2.17 hr

* Post Volume = 5.00 MWh + 5.83 MWh = 10.83 MWh

** Daily Index post price is the weighted average of the Post Volume and Post Price
= $[(5.00 \text{ MWh} * \$67.75) + (5.83 \text{ MWh} * \$66.50)] / 10.83 \text{ MWh} = \67.08

*** Since the post volume is less than 25 MWh, the index will use the actual value, 10.83 MWh.

Day 3:

* The spread volume has changed, however the price has not changed. Each volume is counted as a separate spread.

** Daily Index is the weighted average of the Post Volume and Post Price
= $[(0.85 \text{ MWh} * \$66.50) + (11.80 \text{ MWh} * \$66.50)] / (0.85 \text{ MWh} + 11.80 \text{ MWh}) = \66.50

Day 4:

* Spread Duration = 0.067 hr + 0.35 hr + 0.30 hr = 0.717 hr, which is less than the required 1 hour, so the Daily post volume will be 0.00 MWh.

**This spread is greater than \$2.00 and thus does not qualify. Only spreads less than or equal to \$2.00/MWh for Baseload, less than or equal to \$5.00/MWh for Extended Peak and less than or equal to \$10.00/MWh for Super Peak contracts will be included as a qualifying spread.

6.5 Calculating the Daily Traded Price Using Trades:

The daily traded price is a weighted average of trades, calculated as follows:

$$\text{Weighted average} = \frac{\text{SUM (Traded volume * Traded price)}}{\text{SUM (Traded Volume)}}$$

If there are more than 100 MWh trades in the day, the weighted average is calculated using the total traded volume; however the maximum volume for the day is limited to 100 MWh.

6.6 Calculating the Daily Combined Index Price Using Spreads and Trades:

If both trades and qualifying spreads occur on a given day, the daily combined index price becomes a weighted average of the traded price weighted average and the spread time weighted average as follows:

$$\text{Daily Price} = \frac{(\text{Spread Post Price} * \text{Spread Post Volume}) + (\text{Traded Volume} * \text{Traded Price})}{\text{Spread Post Volume} + \text{Trade Volume}}$$

6.7 Example of Calculating a Daily Combined Index Price:

Given the following spread and trade data, the daily index is calculated as a weighed average.

Spread Post Price: \$68.25

Spread Post Volume: 13.83 MWh

Trade Post Price: \$67.75

Trade Volume: 100 MWh

$$\text{Daily Price: } \frac{(\$68.25 * 13.83 \text{ MWh}) + (\$67.75 * 100 \text{ MWh})}{100 \text{ MWh} + 13.83 \text{ MWh}} = \$67.81$$

$$\text{Daily Volume: } 100 \text{ MWh} + 13.83 \text{ MWh} = 113.83 \text{ MWh}$$

Note: Because the maximum traded volume in a day is 100 MWh and the maximum spread volume in a day is 25 MWh, the daily volume will not exceed 125 MWh for any given day.

6.8 Monthly Index

A weighted average of all Daily Combined Index prices in the interval is then used to calculate the monthly index. Therefore the monthly index can be made up of a combination of qualifying bid/offer spreads and on screen trades.

6.9 Monthly Index Interval

The monthly index will be established using market activity (trades and spreads) starting on the 45th calendar day prior to each month, and ending on the 6th trading day prior to each month for which the index is being set.

For example, the Aug 2006 monthly index will be set based on the weighed average of the posted spreads and traded prices starting on June 17th, 2006 and ending on July 21st, 2006, inclusively.

6.10 Monthly index calculation

The monthly index is calculated using a weighted average as follows:

$$\text{Weighted average monthly index} = \frac{\text{SUM (Daily Index Volume * Daily Index Price)}}{\text{SUM (Daily Index Volume)}}$$

6.11 Monthly Index Generation Days

The monthly index will not be generated on Saturday, Sunday, NERC Holidays or statutory holidays in the Province of Alberta. It will be generated every business day, Monday to Friday unless a NERC Holiday or statutory holiday in the Province of Alberta falls on an index generation day.

6.12 DEFINITIONS

"Alberta Flat" means the periods on each calendar day as follows:

In the case of a Sunday on and from which time is to be one hour in advance of mountain standard time (first Sunday in March), the twenty-three (23) hour period starting at 0000 MPT and ending at 2400 MPT (HE0100 to HE2300 inclusive);

In the case of a Sunday on and from which time is no longer to be one hour in advance of mountain standard time (last Sunday in November), the twenty-five (25) hour period starting at 0000 MPT and ending at 2400 MPT (HE0100 to HE2500 inclusive); and

For all other calendar days, the twenty-four (24) hour period starting at 0000 MPT and ending at 2400 MPT (HE0100 to HE2400 inclusive);

"Alberta Extended Peak" means the sixteen (16) hour periods for each day starting at 0700 MPT and ending at 2300 MPT (HE 0800 to HE 2300 inclusive);

"Alberta Super Peak" means the six (6) hour periods for each day starting at 1700 MPT and ending at 2300 MPT (HE1700 to HE2200 inclusive);

"Bank of Canada Noon Day Rate" means the currency exchange rate between Canadian and US currency as published by the Bank of Canada;

"NERC Holidays" means additional Off-Peak Days (aka "Holidays") as determined by the North American Electric Reliability Council.

APPENDIX B: PUBLISHED INDICES DEFINITIONS

The following indices ("Published Indices") are not owned or generated by NGX. NGX has the right to use these Published Indices for the purpose of settlement of Products traded on the Exchange.

- a. Available U.S. posting options for individual company 40 degree reference price for WTI crude oil with a differential to \$U.S. per barrel:

"Argus Average" is the arithmetic average of the daily mid point quote by Argus for the prompt delivery month trading for that specific grade and location

In the event the mid point of the daily quote is shown as \$U.S.0.005 then the value will be rounded up to the nearest cent.

The abbreviations for the posters as follows:

ConPhil or CP - ConocoPhillips

ARG - Petroleum Argus Americas Crude Report

- b. Available U.S. WTI Index options are:

CMA settlement prices for the applicable delivery months in \$U.S. per barrel, plus/minus a differential in \$U.S. per barrel as specified when entering the Physical Oil Transaction; and

DNS settlement price is the closing daily settlement price for the U.S. Provider as at the date of the Physical Oil Transaction, plus/minus a differential in \$U.S. per barrel as specified when entering the Physical Oil Transaction provided that: (a) when Physical Oil Transactions are for the next most immediate delivery month, the DNS will be the closing daily settlement price for the U.S. Provider prompt contract as at the date of the Physical Oil Transaction; and (b) for Physical Oil Transactions entered into for delivery during any other future month excluding the next most immediate delivery month, the DNS will be the U.S. Provider settlement price for the U.S. Provider contract month that matches the applicable Delivery Period.

Such WTI Index Options are indicated in Table I of the CPA by "CMA" or "DNS" in the "System Price Abbr." column of such table.

All Physical Oil Transactions entered into on a DNS price basis during a Trading Day when the U.S. provider is closed (for any reason) will be settled using the corresponding U.S. Provider values on the most immediate prior trading day of the U.S. Provider.

- c. Available CAD posting options are customized for the applicable Crude Type and include both monthly averages of individual postings and averages of groups of postings in Canadian Dollars per cubic metre, plus/minus a differential in \$U.S. per barrel. The abbreviations for the posters as follows:

BP or B - BP Canada Energy Trading Company Ltd.

Encana or E	-	Encana Crude Oil Marketing
Flint or F	-	Flint Hills Resources Limited
Husky or H	-	Husky Oil Limited
IOL or I	-	Imperial Oil Limited
PCI or I	-	Petro-Canada Products
Shell or Sh	-	Shell Canada Limited
Sun or Su	-	Suncor Inc.

- d. Available Canadian WTI Index options refer to CMA settlement prices for the applicable delivery months in \$U.S. per barrel, plus/minus a differential in \$U.S. per barrel. Such WTI Index options are indicated in Table I in the CPA by "WTI" in the "Systems Price Abbr." column of such table.
- e. "Chicago Bid week Index Price" means for any Calculation Period:
- i. the index price in U.S. dollars per MMBtu for the applicable Month as published in NGI in the table "(Applicable Month) Bid week" corresponding to "Midwest-Chicago Citygate - Bid Week Avg"; or
 - ii. in the event that NGI does not report the required information to determine the Chicago Bid week Month Index Price, or such price is otherwise not available, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold for the entire delivery Month at the Chicago Citygate;
- f. "Chicago Daily Index Price" means for any Calculation Period:
- i. the arithmetic average price in US dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "Citygates - Chicago Citygates - Midpoint"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Henry Daily Index Price, or such price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Chicago Citygate Market Center;
- g. "CIG Rockies Daily Index Price" for any Calculation Period means:
- i. the arithmetic average price in U.S. dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "Rockies, CIG, Rocky Mountains - Mid-point"; or

- ii. in the event that Gas Daily does not report the required information to determine the CIG Rockies Daily Index price, or if the CIG Rockies Daily Index Price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported price in respect of gas bought and sold at the CIG, Rocky Mountains market center;
- h. "CIG Rockies Spot Month Index Price" for any Calculation Period means:
 - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Prices of Spot Gas Delivered to Pipelines (per MMBtu)" corresponding to "Colorado Interstate Gas Co., Rocky Mountains - Index"; or
 - ii. in the event that Inside FERC does not report the required information to determine CIG Rockies Spot Month Index Price hereunder, or the CIG Rockies Spot Month Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the CIG, Rocky Mountains market center;
- i. "EP Permian Daily Index Price" for any Calculation Period means:
 - i. the arithmetic average price in U.S. dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "Permian Basin Area - El Paso, Permian Basin- Mid-point"; or
 - ii. in the event that Gas Daily does not report the required information to determine the EP Permian Daily Index price, or if the EP Perm Daily Index Price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported price in respect of gas bought and sold at the El Paso, Permian Basin market center;
- j. "EP Permian Spot Month Index Price" for any Calculation Period means:
 - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Prices of Spot Gas Delivered to Pipelines (per MMBtu)" corresponding to "El Paso Natural Gas Co., Permian Basis - Index"; or
 - ii. in the event that Inside FERC does not report the required information to determine the EP Permian Spot Month Index Price hereunder, or the EP Permian Spot Month Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the El Paso, Permian Basin market center;
- k. "EP SJ Daily Index Price" for any Calculation Period means:
 - i. the arithmetic average price in U.S. dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "New Mexico - San Juan Basin, El Paso, San Juan Basin - Mid-point"; or

- ii. in the event that Gas Daily does not report the required information to determine the EP SJ Daily Index price, or if the EP SJ Daily Index Price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported price in respect of gas bought and sold at the El Paso, San Juan Basin market center;
- I. "EP SJ Spot Month Index Price" for any Calculation Period means:
 - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Prices of Spot Gas Delivered to Pipelines (per MMBtu)" corresponding to "El Paso Natural Gas Co., San Juan Basin - Index"; or
 - ii. in the event that Inside FERC does not report the required information to determine the EP SJ Spot Month Index Price hereunder, or the EP SJ Spot Month Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the El Paso, San Juan Basin market center;
- i. "Henry Daily Index Price" means for any Calculation Period:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey" corresponding to "Louisiana Onshore South - Henry Hub: Midpoint"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Henry Daily Index Price, or such price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Henry Hub;
- j. "Henry Futures Settlement Price" means:
 - i. the settlement price on the last trading day of a monthly Henry futures contract which corresponds to the applicable Month under a Swap Transaction or applicable delivery Month under a Physical Transaction expressed in US\$ per MMBTU (to four decimal points) as reported in Gas Daily in the table entitled "Futures NYMEX at Henry Hub" under the column called "Settlement", or
 - ii. in the event that Gas Daily does not report a Futures NYMEX at Henry Hub settlement price, Exchange will determine the Henry Futures Settlement Price based on the most comparable reported prices for the applicable Month under a Swap Transaction or applicable delivery Month under a Physical Transaction;
- k. "Houston Ship Channel Daily Index Price" for any Calculation Period means:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in Gas Daily in the table "Daily Price Survey" corresponding to "East - Houston - Katy, Houston Ship Channel"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Houston Ship Channel Daily Index Price hereunder, or the Houston Ship Channel Daily Index Price is otherwise not determinable by Exchange with

reference to the most comparable reported prices in respect or gas bought and sold at the Houston Ship Channel Hub;

- I. "Houston Ship Channel Spot Month Index Price" for any Calculation Period means:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in INSIDE FERC Houston Ship Channel; or
 - ii. in the event that INSIDE FERC Houston Ship Channel does not report the required information to determine the Houston Ship Channel Spot Month Index Price hereunder, or the Houston Ship Channel Spot Month Index Price is otherwise not determinable by Exchange with reference to the most comparable reported prices in respect or gas bought and sold at the Houston Ship Channel Hub;
- m. "Katy Daily Index Price" for any Calculation Period means:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in Gas Daily in the table "Daily Price Survey" corresponding to "East – Houston – Katy, Katy"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Katy Daily Index Price hereunder, or the Katy Daily Index Price is otherwise not determinable by Exchange with reference to the most comparable reported prices in respect or gas bought and sold at the Katy Hub;
- n. "Katy Spot Month Index Price" for any Calculation Period means:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in INSIDE FERC Katy; or
 - ii. in the event that INSIDE FERC Katy does not report the required information to determine the Katy Spot Month Index Price hereunder, or the Katy Spot Month Index Price is otherwise not determinable by Exchange with reference to the most comparable reported prices in respect or gas bought and sold at the Katy Hub;
- o. "Malin Daily Index Price" for any Calculation Period means:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in Gas Daily in the table "Daily Price Survey" corresponding to "Others - PG&E, Malin - Midpoint"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Malin Daily Index Price hereunder, or the Malin Daily Index Price is otherwise not determinable by Exchange with reference to the most comparable reported prices in respect or gas bought and sold at the Malin Hub.
- p. "Malin Bid week Index Price" for any Calculation Period means:

- i. the index price in U.S. dollars per MMBtu for the applicable Month as published in NGI in the table entitled "(Applicable Month) Bid week" corresponding to "California - Malin - avg."; or
 - ii. in the event that NGI does not report the required information to determine the Malin Bid week Index Price hereunder, or the Malin Bid week Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Malin, Oregon Market Center;
- q. "MichCon Daily Index Price" means for any Calculation Period:
 - i. the arithmetic average price in US dollars per MMBTU for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$MMBtu)" corresponding to "Others - MichCon Citygate Midpoint"; or
 - ii. in the event that Gas Daily does not report the required information to determine the MichCon Daily Index Price, or such price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the MichCon Citygate Market Center;
- r. "MichCon Spot Month Index Price" for any Calculation Period means:
 - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Market Center Spot-Gas Prices (per MMBtu)" corresponding to "Upper Midwest - Southern Michigan Citygate Index"; or
 - ii. in the event that Inside FERC does not report the required information to determine the MichCon Spot Month Index Price hereunder, or the MichCon Spot Month Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the MichCon Market Center;
- s. "PG&E Citygate Bid week Index Price" means for any Calculation Period:
 - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in NGI in the table "(Applicable Month) Bid week" corresponding to "California - PG&E Citygate - Avg"; or
 - ii. in the event that NGI does not report the required information to determine the PG&E Citygate Bid week Index Price, or such price is otherwise not available, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold for the entire delivery Month at the PG&E Citygate Market Center;
- t. "PG&E Citygate Daily Index Price" means for any Calculation Period:
 - i. the arithmetic average price in US dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$MMBtu)" corresponding to "PG&E Citygate - PG&E Citygate Midpoint"; or

- ii. in the event that Gas Daily does not report the required information to determine the Daily Index Price, or such price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the PG&E Citygate Market Center;
- u. "Rocky Mountains Daily Index Price" for any calculation period means:
 - i. the arithmetic average price in U.S. dollars per MMBtu for the applicable flow day(s) as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "Rockies - Kern River, Opal Plant - Mid-point"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Rockies Daily Index price, or if the Rockies Daily Index Price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported price in respect of gas bought and sold at the Rockies market center;
- v. "Rocky Mountains Spot Month Index Price" for any Calculation Period means:
 - i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Prices of Spot Gas Delivered to Pipelines (per MMBtu)" corresponding to "Northwest Pipeline Corp., Rocky Mountains - Index"; or
 - ii. in the event that Inside FERC does not report the required information to determine the Rockies Spot Month Index Price hereunder, or the Rockies Spot Month Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Rockies market center;
- w. "Socal Bid week Index Price" for any Calculation Period means:
 - i. index price in U.S. dollars per MMBtu for the applicable Month as published in NGI in the table "(applicable Month) Bid week" corresponding to "California - Southern Border, Socal"; or
 - ii. in the event that Inside FERC does not report the required information to determine the Socal Bid week Index Price, or the Socal Bid week Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Socal Market Center;
- x. "Socal Daily Index Price" for any Calculation Period means:
 - i. the arithmetic average price in U.S. dollars per MMBtu for the applicable flow day or flow days as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "Others - Socal Gas Midpoint"; or
 - ii. in the event that Gas Daily does not report the required information to determine the Socal Daily Index Price, or such price is otherwise not determinable, the price

will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Socal Market Center;

y. "Sumas Daily Index Price" for any Calculation Period means:

- i. the arithmetic average price in U.S. dollars per MMBtu for the applicable flow day or flow days as published in Gas Daily in the table "Daily Price Survey (\$/MMBtu)" corresponding to "Canadian Gas - Northwest Can. bdr (Sumas Midpoint"; or
- ii. in the event that Gas Daily does not report the required information to determine the Sumas Daily Index Price, or such price is otherwise not determinable, the price will be determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Sumas Market Center;

z. "Sumas Spot Month Index Price" for any Calculation Period means:

- i. the index price in U.S. dollars per MMBtu for the applicable Month as published in "Inside FERC's Gas Market Report" in the table "Prices of Spot Gas Delivered to Pipelines (per MMBtu)" corresponding to "Northwest Pipeline Corp., Canadian Border"; or
- ii. in the event that Inside FERC does not report the required information to determine the Sumas Spot Month Index Price hereunder, or the Sumas Spot Month Index Price is otherwise not determinable, the price will be the price determined by Exchange with reference to the most comparable reported prices in respect of gas bought and sold at the Sumas market center;

aa. "Waha Daily Index Price" for any Calculation Period means:

- i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in Gas Daily in the table "Daily Price Survey" corresponding to Permian Basin Area, Waha"; or
- ii. in the event that Gas Daily does not report the required information to determine the Waha Daily Index Price hereunder, or the Waha Daily Index Price is otherwise not determinable by Exchange with reference to the most comparable reported prices in respect or gas bought and sold at the Waha Hub;

bb. "Waha Spot Month Index Price" for any Calculation Period means:

- i. the arithmetic average price in US dollars per MMBtu for the applicable flow days as published in INSIDE FERC Katy; or
- ii. in the event that INSIDE FERC Katy does not report the required information to determine the Waha Spot Month Index Price hereunder, or the Waha Spot Month Index Price is otherwise not determinable by Exchange with reference to the most comparable reported prices in respect or gas bought and sold at the Waha Hub;